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09/217,595	12/22/1998	JARON Z. LANIER	5181-10802	4225

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EXAMINER

TREAT, WILLIAM M

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 27

Application Number: 09/217,595  
Filing Date: 12/22/98  
Appellant(s): Lanier et al.

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Dan R. Christen  
For Appellant

**EXAMINER'S ANSWER**

This is in response to appellants' brief on appeal filed 5/14/01, Reply Brief filed 3/6/02, Supplemental Appeal Brief filed 6/11/02, and Supplemental Appeal Brief filed 12/2/02.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

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The Supplemental Appeal Brief of 12/2/02 contains a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellants' statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellants' statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

The appellants' statement in the brief that certain claims do not stand or fall together is not agreed with because appellants have failed to point out why claims 31-94 are separately patentable. Merely pointing out differences in what the claims cover is not an argument as to why the claims are separately patentable (see 37 CFR 1.192 (c7)). Appellants assert that because the examiner has not provided them with an individual rejection for each of claims 31-94 they are relieved of their obligation under 37 CFR 1.192 (c7) to point out why claims 31-94 are separately patentable, but they provide no authority for this assertion.

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**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

Though no prior art is relied upon by the examiner in the rejection of the claims under appeal (i.e. there is no 35 USC 102 or 103 rejection of the claims based on prior art), the examiner does reference applied prior art of record (Fisher et al. "Virtual Environment Display System") when responding to some of appellants' arguments for patentability.

**(10) *Grounds of Rejection***

The following ground(s) of rejection are applicable to the appealed claims:

Appellants' claims 1-94 are rejected under 35 U.S.C. 251.

First, appellants' claims 1-94 have a defective reissue oath.

Appellants contend that original claims 1-30 are allowable independent of whether claims 31-94 are allowed.

Whether appellants' claims may be ultimately allowable is not the issue. It is the examiner's contention that, currently, appellants have failed to identify at least one error which is relied upon to support the reissue application and they, therefore, have a defective reissue oath. On this basis, appellants' claims 1-30 have been rejected. See 37 CFR 1.175(a)(1) and MPEP § 1414.

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Next, claims 31-94 are rejected under 35 U.S.C. 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that appellant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 U.S.C. 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application. Appellants' independent claims 31, 66, 72, 77, 90, and 94 as well as their dependent claims are an attempt to recapture subject matter of claims 1-30 which was surrendered by applicants when they canceled their original claims 1-30 and then presented amendments to the claims to make them allowable over the rejection. The original subject matter of claims 1-30 was surrendered as well as the subject matter of the amendments added to the claims to make them allowable.

**(11) Response to Argument**

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To make clear the extent of appellants' attempt to recapture, the examiner has chosen to examine appellants' claim 1 in the form which the examiner allowed based on the amendment presented to overcome the prior art of record. It reads as follows.

CLAIM 1. A simulating apparatus comprising:

modeling means for creating a model of a physical environment in a  
computer database;

first body sensing means, disposed in close proximity to a part of a  
first body, for sensing a physical status of the first body part  
relative to a first reference position;

second body sensing means, disposed in close proximity to a part of a  
second body, for sensing a physical status of the second body part  
relative to a second reference position;

first body emulating means, coupled to the first body sensing means,  
for creating a first cursor in the computer database, the first cursor  
including plural first cursor nodes and emulating the physical status  
of the first body part, the first body emulating means including a  
first point hierarchy and a first data flow network, the first point  
hierarchy for controlling a shape and an orientation of the first  
cursor and for attaching each of the plural first cursor nodes

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hierarchically with at least one other of the plural first cursor  
nodes, the first data flow network for controlling motion of the first  
cursor and the first data flow network including a first  
interconnection of first input units, first function units and first  
output units, the first input unit receiving the physical status of  
the first body part, each first function unit including at least one  
input and at least one output and calculating, based on the at least  
one input, a value for each of the at least one output, and the first  
output units for producing position and orientation values for a  
portion of the plural first cursor nodes [emulating the physical status of the first body part];  
first integrating means, coupled to the modeling means and to the  
first emulating means, for integrating the first cursor with the  
model;  
second body emulating means, coupled to the second body sensing means,  
for creating a second cursor in the computer database, the second  
cursor including plural second cursor nodes and emulating the physical  
status of the second body part, the second body emulating means  
including a second point hierarchy and a second data flow network, the  
second point hierarchy for controlling a shape and an orientation of  
the second cursor and for attaching each of the plural second cursor

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nodes hierarchically with at least one other of the plural second  
cursor nodes, the second data flow network for controlling motion of  
the second cursor and the second data flow network including a second  
interconnection of second input units, second function units and  
second output units, the second input units receiving the physical  
status of the second body part, each second function unit including at  
least one input and at least one output and calculating, based on the  
at least one input, a value for each of the at least one output, and  
the second output units for producing position and orientation values  
for a portion of the plural second cursor nodes [emulating the physical status of the second  
body part]; and  
second integration means, coupled to the modeling means and to the  
second body emulating means, for integrating the second cursor with  
the model.

Appellants presented virtually the same basic, carefully-chosen, amendment limitations underlined in claim 1 in independent claim 26 of original Patent No. 5,588,139 to make it and its dependent claims allowable over the examiner's rejection. Another amendment carefully considered as to limitations was presented to make claim 30 allowable over the examiner's rejection. The full scope of the limitations set forth in the language of those amendments is conspicuously missing from all of applicants' new independent claims. Applicants' omission



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from the new reissue claims of limitations set forth in the amendments in the original patent presented to make their claims allowable over the examiner's rejection, or limitations which are very similar in scope, constitutes recapture of surrendered subject matter. Therefore, each of applicants' new claims, all of which omit one or more of the limitations of the subject matter surrendered by virtue of cancellation of the original claims and by virtue of the amendments presented to make their claims allowable over the examiner's rejection, can be seen to constitute recapture.

In defense of their recapture efforts appellants have advanced three major arguments on their behalf.

First appellants have argued only the language argued by appellants as distinguishing over the prior art in the original application should be considered as a limitation to their broadening of their claim language and not the complete language of their amendment. The examiner would remind appellants there is an Examiner Interview Summary Record (paper no. 14, mailed 2/9/96) stating the examiner had agreed to addition of material to the specification taken from appellants' appendix to support the new claim language appellants were going to submit. The added claim language was not introduced on a whim nor was appellant required to add more language than necessary to render his claims patentable. Also, very similar limiting language was added to each of appellants' original independent claims and never the much broader language appellants argued. As a final point, the examiner would merely note that self-serving arguments such as appellants are typically given little weight by the courts.

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Second, appellants have argued in support of rejected claims 31-94:

Deliberately canceling or amending a claim in an effort to overcome a reference strongly suggests that the applicant admits that the scope of the claim before the cancellation or amendment is unpatentable, but it is not dispositive because other evidence in the prosecution history may indicate to the contrary. *In re Clement*, 45 USPQ.2d 1161, 1164 (Fed. Cir.1997).

The facts are that the examiner applied a rejection and applicants amended (i.e. canceled) all 30 claims because they failed to distinguish over the prior art of record. They specifically asked for and were granted a personal interview to discuss amendments which might make their claims allowable over the examiner's rejection. They then presented the full limitations set forth in the language noted above as an amendment to each of their claims 1-25, very similar limitations in the amendment to independent claim 26 and its dependents 27-29, as well as the limiting language of the amendment to independent claim 30, in order to secure an allowance. There is no probative evidence in the prosecution history to suggest otherwise.

Finally, appellants have argued, in substance, in various forms and citing various authorities that the recapture rule does not apply even if their reissue claims are broader in scope than the canceled claims and even though they omit a limitation intentionally added to obtain issuance of a patent if the reissue claim is materially narrower. They have then argued specific language for specific claims as representing material differences from the original claims.

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Though the word, material, is used in various ways throughout their arguments the examiner interprets the courts' and others remarks to mean that the new claims, if broader in relation to surrendered subject matter, must be narrower in another aspect relevant to the originally claimed invention in a manner that provides further patentable distinction. The examiner has addressed all assertions of material narrowing/differences in appellants claims and has found nothing which would justify the liberal broadening of the language of claims 31-94 undertaken by appellants.

For claim 36 they assert the language, "wherein the second set of data is received across a network", represents a material narrowing of the scope of the claim language in an area where the language of the claims was broader. Independent claim 30 of the patent (line 24) reads "... input units receive data from sensors ..." What does one of ordinary skill at the time of appellants invention understand about how this data might be received from sensors? First, in discussing examples of virtual reality systems in their Background of the Invention section, the appellants specifically mention telerobotics (col. 1, line 20). Telerobotics is control of a robot remotely using sensory data received from the robot by means of telecommunications and control data sent to control the robot by means of telecommunications. Jerry Rosenberg in his Dictionary of Computers, Information Processing & Telecommunications, 2nd edition, Wiley & Sons, 1987, defines telecommunications as "any transmission, emission, or reception of signs, signals, writing, images, and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems". Even one

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of only limited skill in the art could not fail to see that a network falls within Rosenberg's definition of a telecommunications means and is a telecommunications means. That same individual of limited skill would also recognize a network is a conventional means for a computer system such as a virtual reality system to gather and transmit data because so much software and hardware has been developed to facilitate such communications. Clearly, one of ordinary skill at the time of appellants' invention recognized that sensory data for a virtual reality system can be obtained remotely by network/telecommunications means. One of ordinary skill is motivated to use remote sensing and control over a network in a prior-art virtual reality system identified by appellants such as telerobotics (col. 1, line 20) to allow people to control robots performing work in environments hostile to humans. One of ordinary skill is motivated to use remote sensing and control over a network in a virtual reality system identified by appellants such as virtual control panels (col. 1, line 20) to allow people to control equipment in, for example, multiple locations throughout a large plant without running from control panel to control panel. To argue such a well-known technique constitutes a "material" difference is ridiculous. Appellants offer no detailed plans for their network in their disclosure nor are there detailed plans for integrating the network within their system. They are depending entirely on the knowledge of one of ordinary skill to implement their network for gathering sensory data, and they already taught in the Background of their Invention section a virtual reality system (Telerobotics) where remote gathering of sensory data

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over a network was already being done. Claim 36 contains no material difference to justify broadening another aspect of their claim language.

For claim 37 appellants assert the language “an Ethernet link, a phone link, an ISDN link, or a satellite link” constitutes a material difference/limitation. These are all prior art forms of networks for which appellants have supplied no specific enablement in their specification other than to merely recite them. As noted in the previous paragraph, one of ordinary skill would have been motivated to use networks with prior-art virtual reality systems. An Ethernet link is an example of a local area network which would be an ideal network for a virtual control panel system for a large plant since it is fast enough to keep up with data demands, commercially available, and well-understood by those of ordinary skill. One of ordinary skill selects a communications network based on desired bandwidth for communicating data, cost, availability, etc. Appellants are depending upon the knowledge of one of ordinary skill to implement conventional forms of networks for known purposes. It seems ludicrous to argue the language of claim 37 constitutes a material difference.

For claim 44 appellants assert the language “machines, articles of manufacture, animals, molecules...” constitutes a material difference/limitation. Original claims 7 and 9 which were canceled recite a “virtual object”. Original claims 19 and 25 which were canceled recite “human being”. Figures 9, 11, and 12 of applied prior art reference Fisher et al. show a virtual world populated by various shapes, machines, articles of manufacture, etc. The concept behind a virtual world is that it can be populated by anything for which one has the

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imagination, data bandwidth, and computing power. Once again, what appellants propose as a material difference is merely conventional.

For claim 68 appellants assert the language “one or more audio display devices configured to produce three-dimensional sounds” constitutes a material difference/limitation. This was claimed in amended (i.e. canceled) original claim 23 which has two audio devices presenting the sound model (i.e, three-dimensional sounds) to a user’s two ears.

For claim 69 appellants assert a material difference based on various forms of body part sensing means. Claim 1 recites an equivalent body sensing means, and its dependent claims 27-29 recite many of the specific means recited in claim 69. Once again, appellants argue trivial differences as material differences.

For claim 94 appellants recite “modify a virtual three-dimensional work piece based on the motion of the first cursor within the virtual world”. If this were a material difference, then the language of original claim 7 reciting “wherein the model includes a virtual object, and further comprising first object manipulating means, coupled to the first body emulating means, for manipulating the virtual object with the first cursor in accordance with corresponding gestures” should have prevailed over the prior art. Yet, it failed to do so.

As a further argument, appellants would have us believe that their system claimed as software embodied on a computer-readable medium or as a kit constitutes a material difference justifying omission of limitations. Anyone who reads claim 1 and its dependents in light of appellants’ specification readily recognizes the claims encompass both the hardware and

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software of appellants' system and would prohibit any claim to appellants' invention by someone who merely copied appellants' system software onto a computer-readable medium or who boxed up the hardware and software components of appellants' system and termed them a kit. Anyone of even less than ordinary skill at the time of appellants' invention would have realized that appellants' software could be placed on a machine-readable medium and, in fact, must have been on a machine-readable medium for appellants' invention to operate. Also, packaging software and computer hardware together and marketing them as a system, what appellants are calling a kit, was a conventional practice at the time of appellants' invention. The examiner takes Official Notice that computers with operating systems and related software were being marketed as systems (i.e. kits) at the time of appellants' invention as well as more specialized systems containing both hardware and software which were frequently referred to as turn-key systems. While appellants may wish to secure software-on-a-machine-readable-medium and kit claims to simplify enforcement of appellants' claims, such language represents only a trivial difference and does not justify omission of material limitation(s).

Appellants have also argued at length that they are entitled to an intermediate scope between the patented claims and the immediately-previous, cancelled claims because they mistakenly amended their claims too narrowly, and they cite some dictum and their interpretation of a 1940 decision by the Patent Office Board of Appeals *Ex parte Lumbard*, 47 USPQ 523 in support of this argument. However, there is a more recent 1956 decision of the Court of Customs and Patent Appeals (*In re Byers*, 43 CCPA 803, 109 USPQ 53 (CCPA

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1956)) in which the court addressed the issue of the patentability of claims of intermediate scope. The court wrote:

[I]t is stated in the appellant's brief that claims 2 and 3 of the present appeal are intermediate in scope between certain broad claims which were canceled from appellant's original application and the limited claim allowed in the patent. Assuming that to be the case, it would not entitle appellant to the reissue sought here. **The rejection is not based on the cancellation of the broader claims referred to in the appellant's brief but on the limiting amendment which was of such a nature as to bar allowance in the reissue application of the claims here on appeal. The fact that there were other claims whose cancellation did not constitute such a bar is immaterial.** (Emphasis added.)

Finally, appellants argue claim 94 contains almost the exact wording of the amendment made during the prosecution of the original application, yet the examiner provides absolutely no explanation of how the recapture rule could possibly apply to claim 94. If one reads original independent claims 1, 26, and 30, one sees that claims 1 and 26 require a second cursor related to a second body part, and this material limitation is missing from claim 94. If one reads claim 30 data is input to the virtual environment from sensors worn on the bodies of at least two users, and this material limitation is missing from claim 94. Since appellants prepared new claim 94 and have had access to original independent claims 1, 26, and 30 for



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years, the examiner finds it remarkable that appellants would not have noticed such a blatant and material difference between the claims.

The examiner has made it quite clear that his position is that all of appellants new claims 31-94 constitute attempts to recapture surrendered subject matter. In support of this position he has pointed out that he views the full scope of the language of appellants' patented claims to constitute surrendered subject matter based on the cancellation of appellants' originally filed claims in the face of the examiner's rejection of those claims and based on appellants' carefully-considered decision, following an in-person interview, to use the particular amendment language presented to make the claims allowable over the examiner's rejection. Anyone of even less than ordinary skill who reads the language of the original patent's independent claims 1, 26, and 30 and compares it against appellants' new claims cannot help but see that appellants have eviscerated the original claim language. In fact, appellants have not even tried to argue any of their new claims but claim 94 are in any way comparable in scope to the original patented claims, and the examiner demonstrated that even that assertion lacked merit.

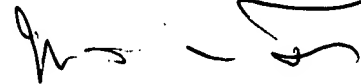
The examiner also has made it abundantly clear it is his position that none of the changes to the language of appellants' patented claims as exhibited in claims 31-94 constitute material differences from the patented claims which might justify broadening the scope of language limiting their patented claims. He has also specifically refuted any recitation by applicants of what they have termed material differences in claims 31-94.

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When the examiner reopened prosecution on 1/29/02, he specifically encouraged appellants to argue their best examples of material differences in the language of claims 31-94 when such arguments could be considered by the examiner and elicit a response. Appellants presented no new arguments.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



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February 10, 2003

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